

R E M A R K S

Claims 1-10, 12-19, and 21-25 are pending. Re-examination and reconsideration are requested.

In the office action, paper number (unspecified), dated May 31, 2007, the examiner provisionally rejected claims 1, 17, and 23 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 12 of copending application serial no. 10/684,207. The examiner rejected claims 1-10, 12-19, and 21-25 under 35 U.S.C. §103(a) as being obvious over the publication to Carlson, et al., U.S. Patent Application Publication No. 2004/0044862 ("Carlson") in view of Kanai, et al., U.S. Patent Application Publication No. 2002/0152181 ("Kanai").

Re the Provisional Double Patenting Rejections:

The examiner provisionally rejected claims 1, 17, and 23 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 12 of copending application serial no. 10/684,207. Applicants acknowledge the provisional double patenting rejection and plan to provide the appropriate terminal disclaimer for the appropriate application at the appropriate time, pursuant to MPEP 804 and 822.01.

Legal Standard For Rejecting Claims
Under 35 U.S.C. §103

The examiner has the burden of establishing a prima facie case of obviousness. In re Rouffet, 149 F.3d 1350, 1355 (Fed. Cir. 1998). "If the examination at the initial stage does not produce a prima facie case of unpatentability, then without more

the applicant is entitled to grant of the patent." In re Oetiker, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

The obviousness determination is controlled by four factors: 1) "the scope and content of the prior art"; 2) the "differences between the claims and the prior art"; 3) "the level of ordinary skill in the pertinent art"; and 4) "objective evidence of non-obviousness." KSR Int'l Co. v. Teleflex, Inc., 127 S. Ct. 1727, 1740-1741 (2007) (quoting Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17-18 (1966) (internal quotations omitted)). In considering the scope and content of the prior art, as well as the differences between the claims and the prior art, the fact finder must determine whether all of the claimed elements are present in the prior art, and if so, the fact finder must also determine "[w]hat the prior art teaches, whether it teaches away from the claimed invention, and whether it motivates a combination of teachings from different references." Dystar Textilfarben GmbH & Co. v. C.H. Patrick Co., 464 F.3d 1356, 1360 (Fed. Cir. 2006). A claim "composed of several elements is not proved obvious merely by demonstration that each of its elements was, independently, known in the prior art." KSR Int'l Co., 127 S. Ct. at 1741. See also Grain Processing Corp. v. Am. Maize Prods. Co., 840 F.2d 902, 907 (Fed. Cir. 1988): "In determining obviousness, the inquiry is not whether each element existed in the prior art, but whether the prior art made obvious the invention as whole for which patentability is claimed" (citation and internal quotations omitted). The analysis must "guard against slipping into the use of hindsight" and "the temptation to read into the prior art the teachings of the invention at issue." Graham, 383 U.S. at 36.

The Federal Circuit has emphasized that it "is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." In re Fritch, 972 F.2d 1260, 1265 (Fed. Cir. 1992). As a check against hindsight analysis, the examiner must conduct an "explicit"

analysis "to determine whether there was an apparent reason to combine the known elements in the fashioned claimed" KSR Int'l Co., 127 S. Ct. at 1741. As the Supreme Court made clear, "[R]ejections based on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." KSR Int'l Co., 127 S. Ct. at 1741 (quoting In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Another consideration in the obviousness analysis is "whether the prior art would also have revealed that in so making or carrying out [the claimed composition or process], those of ordinary skill would have a reasonable expectation of success." In re Vaeck, 947 F.2d 488, 493 (Fed. Cir. 1991). See Takeda Chem. Indus., Ltd. v. Alphapharm Pty, Ltd., ___ F.3d ___, 2007 WL 1839698 (Fed. Cir. 2007).

Thus, proving obvious has three required components: 1) the presence or suggestion of all the claimed elements in the prior art; 2) a reasonable expectation of success from the modification or combination; and 3) an "explicit" analysis of "an apparent reason to combine known elements." MPEP 2143. See In re Vaeck, 947 F.2d at 493.

The fact that a reference "teaches away" from the claimed invention tends to indicate non-obviousness. KSR Int'l Co., 1740. See McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1354 (Fed. Cir. 2001) ("[R]eferences that teach away cannot serve to create a prima facie case of obviousness"); In re Gurley, 27 F.3d 551, 553 (Fed. Cir. 1994) (citing cases). References "teach away" if they (1) discourage one of skill in the art from following the path laid out in the reference; (2) lead one of skill in the art in a direction different from that taken by the applicant; or (3) suggest that the line of development flowing from the reference's teaching will not achieve the results sought by the inventor. Tec Air, Inc. v. Denso Mfg. Mich. Inc., 192 F.3d 1353, 1360 (Fed. Cir. 1999). "Evidence that supports, rather than negates, patentability must be fairly considered."

Re the Section 103 Rejections:

The examiner rejected claims 1-10, 12-19, and 21-25 under Section 103(a) as being unpatentable over Carlson in view of Kanai. These rejections are improper for two reasons. First, neither reference provides an articulated reason that would lead to the combination of the various elements from the two references in the manner required by the pending claims. Second, even if such an articulated reason existed, the resulting combination would still fail to meet the limitations of the pending claims. Therefore, none of the pending claims are obvious over Carlson and Kanai.

The Carlson reference is directed to a method and system for managing storage units in storage pools. According to Carlson, the environment in which the invention is to be used is a tape library system having a tape controller that has access to "zero or more" storage units (e.g., 6) contained in various media pools (e.g., 8). Carlson further teaches that a "user selection is received" to move at least one storage unit to a target storage pool. See, for example, paragraph 6 of Carlson. Graphical user interface (GUI) panels are illustrated in Figures 3, 7, and 9, that allow a user to select the range of physical volumes to be moved (Figure 3); move a range of physical volumes that are empty (Figure 7); and move count of physical volumes (Figure 9). Significantly, Carlson does not disclose or even suggest backup operations or the need to manage backup operations and the media that are to contain the backed-up data.

Kanai discloses a service method of rental storage that allows a storage user 1 to store data at a storage service provider 2. The storage service provider may provide an estimate of future storage required based on the history of usage of storage by the rental storage service user.

Claim 1 is directed to a method that comprises "obtaining backup job information. . ." "calculating a required number of scratch media. . ." and "presenting the required number of scratch media to a user." Thus, the method of claim 1 is directed to a process for managing aspects of the backup operation. While the Carlson reference relates to some aspects of data management, specifically the management and transfer of media among various pools, Carlson does not discuss data backup processes, much less problems associated with data backup, such as problems with insuring sufficient storage media are provided to the proper location and in the proper amount so that the backup process can be successfully completed. While Kanai does discuss data backup, in that data to be backed up may be provided to its rental service, Kanai fails to disclose other aspects of the backup process, including obtaining backup job information and using that backup job information to calculate a required number of scratch media.

Because neither Carlson nor Kanai are directed to the same problems as the present invention, neither reference can be said to provide the required articulated reasoning with some rational underpinning that would support a conclusion of obviousness. That is, it is not sufficient to assert that claim 1 is obvious by merely demonstrating that each of its elements was known in the art. The inquiry is not whether each element exists in the prior art, but whether the prior art made obvious the invention as a whole. It is not enough that Carlson and Kanai are directed to data storage systems. Instead, their teachings must be so directed so as to lead a person having ordinary skill in the art, and with no knowledge of the present invention, to combine the various elements in the manner required by the pending claims. Because neither reference would so lead a person having ordinary skill in the art to make the combination, neither Carlson nor Kanai can make obvious the pending claims.

Moreover, even if it were proper to combine Carlson and Kanai, which is denied, the resulting combination would still

fail to meet the limitations of the pending claims. For example, claim 1 requires "obtaining backup job information from one or more backup applications for a plurality of backup jobs." Carlson nowhere discusses backup operations in general, much less specific backup applications or backup job information relating to a backup application, so that element cannot be found in Carlson. While the examiner asserts that Carlson's disclosure that one pool may be used for archived or backup data, the mere fact that one pool may contain backup data is not the same as the element of claim 1 that requires "obtaining backup job information from one or more backup applications for a plurality of backup jobs." That is, a data pool containing backup data is not "backup job information," nor "one or more backup applications" nor a "plurality of backup jobs."

While Kanai does disclose material relating to backup data, he does so only in the context of a category of information that may be rented on space provided by the storage service provider. That is, Kanai's disclosure is on a par with Carlson. That is, both references recognize that one class of data being stored may be backup data, but that is a far cry from the invention defined by the pending claims. Like Carlson, Kanai also fails to disclose "obtaining backup job information from one or more backup applications," as specifically required by claim 1.

Still yet another limitation of claim 1 that would not be met by the combination of Carlson and Kanai is the limitation that requires "calculating a required number of scratch media needed for one or more future executions of the . . . backup jobs," the calculating comprising "dividing an average historical backup size of the backup job by an average capacity of a media type associated with the backup job." Here again, Carlson is silent as to backup jobs in general and certainly contains no teachings at all wherein calculating would involve dividing an average historical backup size of the backup job by an average capacity of a media type associated with a backup job. To the contrary, in Carlson, the user must manually input the

instructions about the movement of media, as illustrated by the GUI screens of Figures 3, 7, and 9 of Carlson. Of course, if the user makes an incorrect determination, subsequent operations may fail due to improper instructions about media movement. Clearly, Carlson cannot provide this element.

While it is true that the Kanai reference teaches estimating the future usage of storage based on the history of usage of storage by the rental storage service user, Kanai does not calculate an average historical backup size, much less divide the average historical backup size "by an average capacity of a media type associated with the backup job" as further required by claim 1. To the contrary, Kanai estimates future storage usage based on a trend line (e.g., 272, Figure 28), i.e., a "first order equation along with the time axis." See paragraph 162 and Figures 17 and 18 of Kanai. Clearly Kanai's trend line 272 is not the same as an "average historical backup size" as required by claim 1.

In summation then, neither Carlson nor Kanai contain teachings that are so directed that would lead a person having ordinary skill in the art, and with no knowledge of the present invention, to combine the various elements in the manner required by the pending claim 1. The mere fact that both references are directed to data storage systems is not enough. Moreover, even if the references would lead a person having ordinary skill in the art to make the combination, which is denied, the resulting combination would still fail to meet the limitations of pending claim 1. Consequently, pending claim 1 is not obvious over Carlson and Kanai.

Dependent claims 2-10, and 12-16 are at least allowable over Carlson and Kanai because they depend from claim 1, which is allowable over Carlson and Kanai.

Independent claim 17 is allowable over Carlson and Kanai for reasons expressed above with respect to claim 1. That is, the fact that Carlson and Kanai are directed to data storage systems is not enough because neither reference contains the necessary

articulated reasoning with some rational underpinning to support a conclusion of obviousness. Again, a claim composed of several elements is not proved obvious merely by demonstrating that each of its elements can be found in the art. In this regard applicant further notes that even if it were proper to combine Carlson and Kanai, which is denied, the resulting combination would still fail to meet several of the elements and limitations of pending claim 17.

For example, pending claim 17 comprises "an integration agent to receive backup job information. . . from one or more backup applications." Carlson nowhere discusses backup operations, much less specific backup applications or backup job information relating to a backup application. Carlson merely mentions that the media contained in one pool may comprise backup data. However, the mere mention that a data pool may comprise media containing backup data is not an "integration agent," much less an integration agent that receives "backup job information" from "one or more backup applications." Consequently, this element of claim 17 cannot be found in Carlson. While Kanai does talk about backup data, he also does so only in the context of describing a category of information that may be rented on space provided by the storage service provider. Kanai does not disclose an "integration agent" that receives "backup job information from one or more backup applications," as specifically required by claim 17.

Still yet another limitation of claim 17 that would not be met by the combination of Carlson and Kanai is the limitation that requires "a planner to calculate a required number of scratch media . . . by dividing the average historical backup size of the backup job by an average capacity of a media type. . ." As discussed above, Carlson is silent as to backup jobs in general and contains no teachings at all about a planner that would calculate a required number of scratch media by dividing an average historical backup size of the backup job by an average capacity of a media type associated with a backup job. To the

contrary, in Carlson, the user must manually input the instructions about the movement of media, as illustrated by the GUI screens of Figures 3, 7, and 9 of Carlson. Of course, if the user's instructions are incorrect, subsequent media movement actions may fail. Clearly, Carlson cannot supply this element of claim 17.

While the Kanai reference teaches estimating the future usage of storage based on the history of usage of storage by the rental storage service user, Kanai does not calculate an average historical backup size, much less divide the average historical backup size "by an average capacity of a media type associated with the backup job" as required by claim 17. To the contrary, Kanai estimates future storage usage based on a "first order equation along with the time axis." See paragraph 162 and Figures 17 and 18 of Kanai. This is not the same as an "average historical backup size" as required by claim 17.

Neither Carlson nor Kanai contain teachings that are so directed that would lead a person having ordinary skill in the art, and with no knowledge of the present invention, to combine the various elements in the manner required by the pending claim 17. Moreover, even if the references would lead a person having ordinary skill in the art to make the combination, which is denied, the resulting combination would still fail to meet the limitations of pending claim 17. Consequently, pending claim 17 is not obvious over Carlson and Kanai.

Dependent claims 18, 19, 21, and 22 are at least allowable over Carlson and Kanai because they depend from claim 17, which is allowable over Carlson and Kanai.

Independent claim 23 is allowable over Carlson and Kanai for reasons expressed above with respect to claims 1 and 17. That is, neither reference contains the necessary articulated reasoning and rational underpinning to support a conclusion of obviousness. The fact that Carlson and Kanai are directed to data storage systems is not enough, nor is it sufficient to merely demonstrate that each of the elements of claim 23 can be

found in Carlson and Kanai. Indeed, this much is not even possible, because even if it were proper to combine Carlson and Kanai, which it is not, the resulting combination would still fail to meet several of the elements and limitations of pending claim 23.

For example, claim 23 is directed to a machine-readable medium having instructions stored thereon which would cause the machine to obtain "backup job information. . .from one or more backup applications." Carlson nowhere discusses backup operations, much less specific backup applications or backup job information relating to a backup application. While Carlson mentions that the media contained in one pool may comprise backup data, the mere mention that a data pool may comprise media containing backup data would not cause the machine to obtain "backup job information" from "one or more backup applications." Consequently, this element of claim 23 cannot be found in Carlson. While Kanai does talk about backup data, he does so only in the context of a category of information that may be rented on space provided by the storage service provider. Kanai does not disclose obtaining "backup job information from one or more backup applications," in the context of claim 23.

Claim 23 contains yet another limitation that would not be met by the combination of Carlson and Kanai. More specifically, claim 23 requires "instructions for calculating the required number of scratch media" that are arrived at by "dividing an average historical backup size by an average capacity of a media type. . ." As discussed above with respect to claims 1 and 17, Carlson is silent as to backup jobs in general and contains no teachings at all about a planner that would calculate a required number of scratch media by dividing an average historical backup size of the backup job by an average capacity of a media type associated with a backup job. To the contrary, in Carlson, the user must manually input the instructions about the movement of media, as illustrated by the GUI screens of Figures 3, 7, and 9 of Carlson. Clearly, Carlson cannot supply this element of claim

23.

The Kanai reference teaches estimating the future usage of storage based on the history of usage of storage by the rental storage service user. However, Kanai does not calculate an average historical backup size, much less divide the average historical backup size "by an average capacity of a media type associated with the backup job" as required by claim 23. Instead, Kanai estimates future storage usage based on a "first order equation along with the time axis." See paragraph 162 and Figures 17 and 18 of Kanai. This is not the same as an "average historical backup size" as required by claim 23.

To sum up, neither Carlson nor Kanai contain teachings that are so directed that would lead a person having ordinary skill in the art, and with no knowledge of the present invention, to combine the various elements in the manner required by the pending claim 23. Moreover, even if the references would lead a person having ordinary skill in the art to make the combination, which is denied, the resulting combination would still fail to meet the limitations of pending claim 23. Consequently, pending claim 23 is not obvious over Carlson and Kanai.

Dependent claims 24 and 25 are at least allowable over Carlson and Kanai because they depend from claim 23, which is allowable over Carlson and Kanai.

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Applicants believe that all of the claims pending in this patent application are allowable and that all other issues raised by the examiner have been rectified. Therefore, applicants respectfully request the examiner to reconsider the rejections and to grant an early allowance. If any questions or issues remain to be resolved, the examiner is requested to contact the

applicants' attorney at the telephone number listed below.

Respectfully submitted,
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